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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/464,671	12/15/1999	HUAI-RONG SHAO	MSI-438US	7956
22801	7590	09/10/2004	EXAMINER	
LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201			EL HADY, NABIL M	
			ART UNIT	PAPER NUMBER
			2154	

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/464,671

Applicant(s)

SHAO ET AL.

Examiner

Nabil M El-Hady

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-68 and 70-72 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-68 and 70-72 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

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1. Claims 1-68 and 70-72 are pending in this application.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-68 and 70-72 are rejected under 35 U.S.C. 102(e) as being anticipated by Aharoni et al. (US 6,014,694).

4. As to claim 1, Aharoni discloses the invention as claimed including a method comprising: receiving a data bitstream that includes object-based media information (col. 2, lines 31-32; and col. 8, lines 56-63); associating portions of the object-based media information with a plurality of different transmission priority levels (col. 2, lines 29-31); and selectively transmitting the portions of the object-based media information along with the associated plurality of different transmission priority levels (inherent) over a network (col. 2, lines 31-35) configured to provide differential services based at least on the plurality of different transmission priority levels (inherent in col. 7, lines 39-42).

5. As to claim 24, the claim is rejected for the same reasons as claim 1 above. In addition, Aharoni discloses an arrangement comprising: a server device (18, Figs. 1 and 2) configured to

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provide a data bitstream that includes object-based media information having portions of the object-based media information (col. 2, lines 31-32; and col. 8, lines 56-63) associated with a plurality of different transmission priority levels (col. 2, lines 29-31) and that includes identifications of the associated plurality of different transmission priority levels (inherent); at least one client device (22, Fig. 1); and at least one communication network operatively coupled between the server device and the client device (20, Fig. 1).

6. As to claim 47, Aharoni discloses the invention as claimed including a method for use in a communications node within a network, the method comprising: receiving data at the communication node that includes object-based media information (col. 2, lines 31-32; and col. 8, lines 56-63) that is a packetized according to different transmission priority levels (col. 2, lines 29-31); and selectively outputting from the communication node the portions of the object-based media information to based at least on the plurality of different transmission priority levels (col. 2, lines 31-35).

7. As to claim 65, Aharoni discloses the invention as claimed including a system comprising: at least one client device (22, Fig. 1) configured to receive prioritized video object-based data packets (col. 2, lines 29-35) and output control requests relating to a video object (col. 7, lines 62-67); at least one server device configured to output prioritized object-based data packets representing the video object (14, Fig. 1), the prioritized object-based data packets being prioritized based at least on part on the type of data as selected from a group comprising control data, shape data, motion data, and texture data (col. 9, lines 57-64); and at least one video transmission agent (VTA) coupled to receive the prioritized object-based data packets from the server device (18, Figs. 1 and 2) and the control requests from the client device (34,

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Fig. 2), and to selectively output at least a portion of the received prioritized object-based data packets to the client device based in response to the control requests (col. 2, lines 31-35; and col. 7, lines 63-67).

8. As to claim 70, the claim is rejected for the same reasons as claim 1 above. In addition, a computer-readable medium having computer-executable instructions for performing the steps recited in Claim 1 is inherent in Aharoni's disclosure.

9. As to claim 71, the claim is rejected for the same reasons as claim 47 above. In addition, a computer-readable medium having computer-executable instructions for performing the steps recited in claim 47 is inherent in Aharoni's disclosure.

10. As to claims 2-4, 25-27, and 48-49, Aharoni discloses the data bitstream includes object-based media information for a single object, the single object is a video or audio object (inherent in col. 7, lines 7-11; and col. 8, lines 54-63).

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11. As to claims 5 and 28, Aharoni discloses placing the portions of the object-based media information in a plurality of data packets, wherein each data packet is associated with a specific transmission priority (inherent in col. 3, lines 50-59).

12. As to claims 6 and 29, Aharoni discloses at least one of the plurality of data packets includes non-contiguous portions of data from within the data bitstream (inherent in Figs. 5, 6, and 7; in Fig. 8).

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13. As to claims 7 and 30, Aharoni discloses causing the network to selectively halt the transmission of a first data packet carrying object-based media information that is associated with a first priority level prior to halting the transmission of a second data packet carrying object-based media information that is associated with a second priority level prior if the second priority level is higher than the first priority level, should a need arise while transmitting the first and second data packets (inherent in col. 2, lines 6-7; col. 7, lines 35-36, col. 9, lines 13-15, 57-64).

14. As to claims 8, 31, and 50, Aharoni discloses different substantially guaranteed Quality of Service (QoS) transmission capabilities for different transmission priority levels (inherent in col. 7, lines 39-42).

15. As to claims 9, 32, and 51, Aharoni discloses the object-based media information includes a plurality of different types of video frame layers selected from a group that includes Intra (I) coded frame layers, Predicted (P) frame layers, Bi-directionally (B) predicted frame layers, Intra (I) coded frame enhancement layers, Predicted (P) frame enhancement layers, and Bi-directionally (B) predicted frame enhancement layers (inherent in col. 3, lines 1-8; col. 8, line 44 to col. 10, line 65).

16. As to claims 10, 23, and 52, Aharoni discloses setting the transmission priority levels based at least in part on the type of video frame layer (col. 9, lines 57-64).

17. As to claims 11, 34, and 53, Aharoni discloses causing Intra (I) coded frame layer data to have a higher transmission priority level than Predicted (P) frame layer data; causing

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Predicted (P) frame layer data to have a higher transmission priority level than Bi-directionally (B) predicted frame layer data; causing Bi-directionally (B) predicted frame layer data to have a higher transmission priority level than Intra (I) coded frame enhancement layer data; causing Intra (I) coded frame enhancement layer data to have a higher transmission priority level than Predicted. (P) frame enhancement layer data; and causing Predicted (P) frame enhancement layer data to have a higher transmission priority level than Bi-directionally (B) predicted frame enhancement layer data (inherent in col. 7, lines 16-19; col. 9, line 57 to col. 10, line 48).

18. As to claims 12, 25, and 54, Aharoni discloses a plurality of different types of video object information selected from a group that includes control information, shape information, motion information and texture information (col. 9, lines 16-56).

19. As to claims 13, 36, and 55, Aharoni discloses setting the transmission priority levels based at least in part on the type of video object information (col. 9, line 57 to col. 10, line 20).

20. As to claims 14-17, 37-40, and 56-59, Aharoni discloses causing at least a portion of the control information to have a higher transmission priority level than at least a portion of the shape information, causing at least a portion of the shape information to have a higher transmission priority level than at least a portion of the motion information, causing at least a portion of the motion information to have a higher transmission priority level than at least a portion of the texture information, and causing at least a portion of the texture information to have a higher transmission priority level than at least a portion of the shape information (inherent in col. 7, lines 16-19; col. 9, line 57 to col. 10, line 48).



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21. As to claims 41 and 60, Aharoni discloses the object-based media information includes a plurality of different types of video frame layers selected from a group that includes Intra (I) coded frame layers, Predicted (P) frame layers, Bi-directionally (B) predicted frame layers, Intra (I) coded frame enhancement layers, Predicted (P) frame enhancement layers, and Bi-directionally (B) predicted frame enhancement layers; the object-based media information further includes a plurality of different types of video object information selected from a group that includes control information, shape information, motion information and texture information; and wherein associating portions of the object-based media information with the plurality of different transmission priority levels further includes setting the transmission priority levels based at least in part on the type of video frame layer and the type of video object information (inherent in col. 7, lines 16-19; col. 9, line 57 to col. 10, line 48).

22. As to claims 19, 42, and 61, Aharoni discloses setting the transmission to priority levels based at least in part on the type of video frame layer and the type of video object information further includes: setting control information to a class 0 transmission priority level; setting shape information and texture DC information of at least one Intra (I) coded frame layer to a class 1 transmission priority level; setting texture AC information of the Intra (I) coded frame base layer to a class 2 transmission priority level; setting shape information and motion information of at least one Predicted (P) frame layer to a class 3 transmission priority level; setting texture information of the Predicted (P) frame layer to a class 4 transmission priority level; and setting shape information, motion information and texture information of at least one Bi-directionally (B) predicted -frame base layer to a class 5 transmission priority level, and wherein the class 0 transmission priority level is higher than the class 1 transmission priority level, the class 1 transmission priority level is higher than the class 2 transmission priority level, the class 2

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transmission priority level is higher than the class 3 transmission priority level, the class 3 transmission priority level is s higher than the class 4 transmission priority level, and the class 4 transmission priority level is higher than the class 5 transmission priority level (inherent in col. 7, lines 16-19; col. 9, line 57 to col. 10, line 48; Figs. 4, 4, 6, 7, and 8).

23. As to claims 20-21, 43-44, and 62, Aharoni discloses receiving at least one down-stream preference with regard to the object-based media information; and selectively transmitting at least one of the portions of the object-based media information over the network based on the down-stream preference, and selectively halting the transmission of at least one of the portions of the object-based media information over the network based on the down-stream preference (inherent in col. 31-42,55-65; and col. 7, lines 39-42).

24. As to claims 22, 45, and 63, Aharoni discloses the data bitstream includes MPEG-4 encoded video data (col. 6, lines 56-60).

25. As to claims 23, 46, and 64, Aharoni discloses the network is an Internet Protocol (IP) based network (col. 2, lines 10-15).

26. As to claim 66, Aharoni discloses a network operatively coupled between the server device and the client device and wherein the video transmission agent (VTA) is operatively configured within the network ( Figs. 1 and 2).

27. As to claim 67, Aharoni discloses providing differential services to the prioritized object-based data packets (inherent in col. 7, lines 39-42), such that prioritized object-based

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data packets having lower priority levels are selectively dropped should the network become congested (col. 7, lines 35-36; and col. 2, lines 6-7).

28. As to claim 68, Aharoni discloses the invention as claimed including a computer-readable medium having a data structure, comprising: a first field containing identifying data associated with a portion of a data bitstream that represents a video object ( e.g. 60, Fig. 4); at least one second field that is derived from the first field and includes data representing object-based video information for the video object that has been classified as having a specific transmission priority level based on at least one type of object-based video information selected from a group comprising control information, shape information, motion information, and texture information (e.g. LEVEL 1 of KEY FRAMR, Fig. 5); and a third field comprising a network packet header and containing identifying data associated with the specific transmission priority level of the data in the second field (inherent in e.g. LEVEL 1 of KEY FRAMR, Fig. 5).

29. As to claim 72, the claim is rejected for the same reasons as claims 1 and 68 above.

30. Applicant's arguments filed 6/1/2004 have been fully considered but they are not persuasive. Therefore rejection of claims 1-68 and 70-71 is maintained.

31. In the remarks, applicants argued in substance that (1), no prioritization information of Aharoni et al. is considered external to the "video server 18"; (2) no activity within the network 20; (3) no art of record discloses "selectively transmitting ..." in claim 1; (4) no art in record discloses " a server device configured ...." In claim 24; (5) no art in rerecord discloses 'receiving data at the communication node ..." in claim 47; (6) no art in record discloses "at least one video

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transmission agent ..." in claim 65; (7) no art in record discloses "a third field comprising a network packet header ..." in claim 68; and (8) no art in record discloses "associating portions of the object-based media ..." in claim 72. Examiner respectfully disagree and traverses applicants' remarks.

32. As to points (1) and (2), first, it is noted that the features upon which applicant relies (i.e., no prioritization information is considered external to the video server) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Second, the prioritization information taking place partially in the video server 18 is inherently selectively transmitted to a specific client over a network that is configured to provide the offered differential service. It is also needless to note that all component of Fig. 1 of Aharoni et al. are considered parts of the network.

33. As to points (4) – (8), applicant is referred to the above rejections for demonstrating how Aharoni et al. discloses the corresponding limitation.

34. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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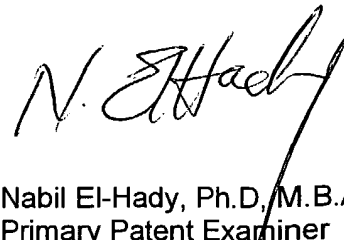
however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

35. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nabil M El-Hady whose telephone number is (703) 308-7990. The examiner can normally be reached on 9:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (703) 305-8498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 7, 2004



Nabil El-Hady, Ph.D./M.B.A.  
Primary Patent Examiner  
Art Unit 2154